



# United States Department of the Interior

GEOLOGICAL SURVEY

RESTON, VA 22092



## POST-CRUISE REPORT

24 MAY 1993

GS-1  
#93008

# HOORAY !!!

TO: Brad Butman, Chief, Branch of Atlantic Marine Geology

FROM: Ron Circé

SUBJECT: Offshore Geological Framework of Lake Erie

12 - 13 May: Mobilization of the R/V GS-1

14 - 22 May: Collection of sidescan sonar, bathymetry and high resolution geophysical data. LORAN-C was used for navigation.

### Equipment Utilized

- Klein sidescan sonar @ 100 kHz
- Q-MIPS digital acquisition, storage and display for sidescan sonar
- Odem bathymetric profiler
- 3.5 kHz high-resolution geophysical profiler
- Geopulse power supply (operating at either 175 or 280 joules)
- Hunttec boomer sled
- ITT 10-element hydrophone

- VHS tape recorder for analog recording of subbottom geophysical data
- EPC 9800 thermal recorder and NEC laptop PC for analog display of subbottom data
- LORAN-C navigation
- assorted colored "black magic boxes"

### Personnel

#### *U. S. Geological Survey*

*Ron Circé, Co-Chief Scientist  
Dave Nichols, Electronics Technician*

#### *Ohio Geological Survey*

*Nate Fuller, Co-Chief Scientist  
Dale Liebenthal, Captain, R/V GS-1*

*During the period from 14 to 21 May, we completed a total of 316.8 line km (171 nm) of tracklines. These lines extended from offshore Lorain to Fairport Harbor, Ohio and out to the International Boundary (US and Canada). This cruise completed the reconnaissance geophysical framework for the Ohio portion of Lake Erie. A total of 1211.86 line kilometers (654 nautical line miles) of sidescan sonar, digital bathymetry and high resolution subbottom data was collected on 4 cruises. The latest cruise "filled in" vital gaps that had been weathered out on previous cruises.*

*cc: USGS: Bob Oldale, Harley Knebel, Nancy Soderberg, Tom O'Brien, Dave Nichols, Ken Parolski, Tom Aldrich, and John Haines*

*OGS: Nate Fuller, Dale Liebenthal, and Scudder Mackey*

LINE #	DATE	JD/TIME	ZONE
1	5/14/93	134/0854	EDT
2		134/0920-1305	EDT
3		134/1308-1555	EDT
4		134/1604-1735	EDT
5	5/16/93	136/1315-1420	EDT
6	5/17/93	137/0850-1107	EDT
7		137/1112-1524	EDT
8	5/18/93	138/0800-1135	EDT
9		138/1135-1600	EDT
10		138/1600-1634	EDT
11	5/20/93	140/0922-1125	EDT
12		140/1130-1332	EDT
13		140/1336-1535	EDT
14	5/21/93	141/0900-1119	EDT
15		141/1119-1255	EDT
16		141/1300-1430	EDT
17		141/1547-1610	EDT